AMENDMENTS TO THE CLAIMS:

1. (Original) A method for rendering a polygon, the method comprising:

receiving geometry data defining vertices of the polygon,

computing initial vertex x,y values at end points proximate to each of the vertices of the polygon;

computing a slope along each edge of the polygon;

interpolating x,y values along each respective edge of the polygon, wherein said interpolating uses the computed slope along the respective edge of the polygon;

storing final x,y values for each respective edge of the polygon, wherein, for each respective edge, said storing final x,y values comprises storing the interpolated x,y values for non-end points of the respective edge, and said storing final x,y values comprises storing the computed initial vertex x,y values for each of the end points of the respective edge.

2. (Original) The method of claim 1, wherein said storing the computed initial vertex x,y values for each of the end points of the respective edge comprises replacing interpolated x,y values at the end points with the computed initial vertex x,y values.

3. (Original) The method of claim 1, wherein said storing the computed initial vertex x,y values for each of the end points of the respective edge operates to prevent inclusion of an extraneous pixel and/or exclusion of a pixel within the polygon.

4. (Original) The method of claim 1, wherein the computed slope is a quantized slope value.

5. (Original) The method of claim 1, wherein the slope value is represented by a quantized value having a first number of bits of precision, wherein the first number of bits of precision produce inaccuracies for interpolated x,y values computed at the end points of at least one edge of the polygon.

6. (Original) The method of claim 1, wherein the final x,y values comprise pixels for the polygon.

7. (Original) The method of claim 1, wherein the polygon is a triangle.

8. (Original) A method for rendering a polygon, the method comprising:

receiving vertex data defining vertices of a polygon, wherein the vertices include a first vertex and a second vertex;

computing initial vertex x,y values for end points proximate to the first vertex and the second vertex of the polygon;

calculating a slope value along a first edge of the polygon located between the first vertex and the second vertex;

interpolating x,y values along the first edge of the polygon between the first vertex and the second vertex, wherein said interpolating uses the calculated slope value along the first edge of the polygon;

storing final x,y values for the first edge of the polygon, wherein said storing final x,y values comprises storing the interpolated x,y values for non-end points of the first edge, and said storing final x,y values comprises storing the computed initial vertex x,y values for each of the end points of the first edge.

9. (Original) The method of claim 8,

wherein said computing, said calculating, said interpolating, and said storing are performed for each of the edges of the polygon.

10. (Original) The method of claim 8, wherein said storing the computed initial vertex x,y values for each of the end points of the first edge comprises replacing interpolated x,y values at the end points with the computed initial vertex x,y values.

11. (Original) The method of claim 8, wherein said storing the computed initial vertex x,y values for each of the end points of the first edge operates to prevent inclusion of an extraneous pixel and/or exclusion of a pixel within the polygon.

12. (Original) The method of claim 8, wherein the slope value is a quantized slope value.

13. (Original) The method of claim 8, wherein the slope value is represented by a quantized value having a first number of bits of precision, wherein the first number of bits of precision produce inaccuracies for interpolated x,y values computed at the end points of the first edge of the polygon.

14. (Original) The method of claim 8, wherein the final x,y values comprise pixels for the polygon.

15. (Original) The method of claim 8, wherein the polygon is a triangle.

16. (Original) A method for rendering pixels, the method comprising:

receiving vertex data defining vertices of a polygon,

computing initial vertex x,y values proximate to each of the vertices of the polygon;

computing a slope along each edge of the polygon;

interpolating x,y values along a first edge of the polygon, wherein the first edge is located between a first vertex and a second vertex of the polygon, wherein said interpolating uses a computed slope along the first edge of the polygon;

wherein said interpolating comprises using the computed initial vertex x,y values for end points of the first edge proximate to each of the first vertex and the second vertex.

17. (Original) A system for rendering a polygon, the system comprising:

a vertex processor operable to receive vertex data defining vertices of a polygon, wherein the vertices include a first vertex and a second vertex, wherein the vertex processor is operable to assemble the vertex data

a render system coupled to the vertex processor to receive the assembled vertex data; and

a memory coupled to the setup unit;

wherein the render system is operable to:

compute initial vertex x,y values for end points proximate to the first vertex and the second vertex of the polygon;

calculate a slope value along a first edge of the polygon located between the first vertex and the second vertex;

interpolate x,y values along the first edge of the polygon between the first vertex and the second vertex, wherein said interpolating uses the calculated slope value along the first edge of the polygon; and

store final x,y values for the first edge of the polygon in the memory, wherein, in storing the final x,y values, the render system is operable to store the interpolated x,y values for non-end points of the first edge and store the computed initial vertex x,y values for each of the end points of the first edge.

18. (Original) The system of claim 17, wherein, in storing the computed initial vertex x,y values for each of the end points of the first edge, the render system is operable to replace interpolated x,y values at the end points with the computed initial vertex x,y values.

19. (Original) The system of claim 17, wherein storage of the computed initial vertex x,y values for each of the end points of the first edge operates to prevent inclusion of an extraneous pixel and/or exclusion of a pixel within the polygon.

20. (Original) The system of claim 17, wherein the slope value is represented by a quantized value having a first number of bits of precision, wherein the first number

of bits of precision produce inaccuracies for interpolated x,y values computed at the end points of the first edge of the polygon.

21. (Original) The system of claim 17, wherein the polygon is a triangle.

22. (Original) The system of claim 17, wherein the render system comprises at least one edge walker for interpolating the x,y values along the first edge of the polygon.

23. (Original) A system for rendering a polygon, the system comprising:

means for receiving geometry data defining vertices of the polygon,

means for computing initial vertex x,y values at end points proximate to each of the vertices of the polygon,

means for computing a slope along each edge of the polygon;

means for interpolating x,y values along each respective edge of the polygon, wherein said interpolating uses the computed slope along the respective edge of the polygon;

means for storing final x,y values for each respective edge of the polygon, wherein, for each respective edge, said storing final x,y values comprises storing the interpolated x,y values for non-end points of the respective edge, and said storing final x,y values comprises storing the computed initial vertex x,y values for each of the end points of the respective edge.

24. (New) A method for triangle rendering, the method comprising:

receiving geometry data defining vertices of the triangle;

for each edge of the triangle:

computing an initial edge intercept corresponding to the edge and proximate to a first vertex of the edge;

computing a slope for the edge;

interpolating x,y positions along the edge starting from the initial edge intercept and progressing towards a second vertex of the edge;

storing data including (a) one or more of the interpolated x,y positions and (b) an x,y position of the second vertex as defined by the geometry data instead of one of the interpolated x,y positions which is proximate to the second vertex;

performing rendering computations on the triangle using the stored data.